

## REMARKS

The claims are provided as a convenience to the Examiner.

Claims 25, 26, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox et al. (US Patent No. 5,812,533); claims 5-20, 24-26, 28-33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being obvious over Cox et al.; and claims 27-34 and 36-40 are rejected under 35 U.S.C. 103(a) as being obvious over Cox et al. in view of Daly (US Patent No. 5,748,896). These rejections are respectfully disagreed with and are traversed below.

Cox et al. teach a Service Delivery Infrastructure (SDI) to support and manage telecommunications service delivery in a telecommunications network. Within the Cox et al. Service Delivery Infrastructure a “service is considered to be a unique entity which only has meaning within the context of a particular virtual network 800. Therefore a virtual network 800 must exist before a service can be deployed within the SDI 200.” (column 20, lines 60-63) Additionally, Cox et al. state that “an SDI service is an executable application that can process calls.” (column 21, lines 1-2)

Claim 25 recites in part:

“..provisioning the customer, within the constraints imposed by the SLA, by allocating at least some required data processing resources to at least one data processing site that offers data processing capacity for use; and transparently re-provisioning the customer, within the constraints imposed by the SLA, by re-allocating at least some required data processing resources from the at least one data processing site that offers data processing capacity for use to one of the customer, the service provider, or another service provider.” (emphasis added)

Cox et al. do not teach or suggest at least the step of “allocating at least some required data

processing resources to at least one data processing site that offers data processing capacity for use”, or the step of “re-allocating at least some required data processing resources from the at least one data processing site that offers data processing capacity for use to one of the customer, the service provider, or another service provider,” as recited in claim 25. In fact, in rejecting claim 25, the Examiner made no mention whatsoever of at least the highlighted claim language shown immediately above. At least for this reason, Cox et al. cannot anticipate claim 25 under 35 U.S.C. 102(b). As it is well recognized, “to constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art,” Ex Parte Gould, BPAI, 6 USPQ 2d, 1680, 1682 (1987), citing with approval In re Marshall, 578 F.2D 301, 304, 198 USPQ 344, 346 (CCPA 1978). Therefore, claim 25 should be allowed.

This same argument applies to claims 26 and 35. More specifically, claim 26 recites in part:

“..provisioning the customer, within the constraints imposed by the SLA, by allocating at least some required data processing resources to at least one other service provider that offers data processing capacity for use; and transparently re-provisioning the customer, within the constraints imposed by the SLA, by re-allocating at least some required data processing resources from the at least other service provider that offers data processing capacity for use to one of the customer, the service provider, or a data processing site that offers data processing capacity for use.” (emphasis added)

Cox et al. do not teach or suggest at least the step of “allocating at least some required data processing resources to at least one other service provider that offers data processing capacity for use”, or the step of “re-allocating at least some required data processing resources from the at least other service provider that offers data processing capacity for use to one of the customer, the service provider, or a data processing site that offers data processing capacity for use.” In fact, in rejecting claim 26, the Examiner made no mention whatsoever of at least the highlighted claim language shown immediately above. At least for this reason, Cox et al. cannot anticipate claim

26 under 35 U.S.C. 102(b) and claim 26 should be allowed.

Claim 35 recites in part:

“..third executable code for provisioning the customer, within the constraints imposed by the SLA, by allocating at least some required data processing resources to at least one of the service provider, the customer, to another service provider, or to a data processing site that offers data processing capacity for use; and fourth executable code for transparently re-provisioning the customer, within the constraints imposed by the SLA, by re-allocating at least some required data processing resources between at least one of the service provider, the customer, the another service provider, or the data processing site that offers data processing capacity for use.” (emphasis added)

Cox et al. do not teach or suggest at least the step of “allocating at least some required data processing resources to at least one of the service provider, the customer, to another service provider, or to a data processing site that offers data processing capacity for use”, or the step of “re-allocating at least some required data processing resources between at least one of the service provider, the customer, the another service provider, or the data processing site that offers data processing capacity for use.” In rejecting claim 35, the Examiner made no mention whatsoever of at least the highlighted claim language shown immediately above. At least for this reason, Cox et al. cannot anticipate claim 35 under 35 U.S.C. 102(b) and claim 35 should be allowed.

Similarly, claim 36 recites in part:

“..a plurality of data processing sites coupled to a communication network, individual ones of said sites comprising program code for registering available data processing capability using said communication network; and a virtual service provider coupled to the customer through the communication network,

said virtual service provider comprising a system management server for establishing a set of attributes of a customer service provision, and for allocating data processing capability for provisioning the customer from the data processing capability registered by said plurality of data processing sites." (emphasis added)

Cox et al. do not teach or suggest at least the step of "a plurality of data processing sites coupled to a communication network... for registering available data processing capability using said communication network", or "a virtual service provider coupled to the customer through.... a system management server... for allocating data processing capability for provisioning the customer from the data processing capability registered by said plurality of data processing sites" In rejecting claim 36, the Examiner made no mention whatsoever of at least the highlighted claim language shown immediately above. At least for this reason, Cox et al. cannot anticipate claim 36 under 35 U.S.C. 102(b) and claim 36 should be allowed.

The Examiner is again respectfully reminded that for a rejection to be made on the basis of anticipation, it is well recognized that "to constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art", Ex Parte Gould, BPAI, 6 USPQ 2d, 1680, 1682 (1987), citing with approval In re Marshall, 578 F.2d 301, 304, 198 USPQ 344, 346 (CCPA 1978).

Thus, claims 25, 26, 35 and 36 are clearly not anticipated by Cox et al. and should be allowed.

Turning now to the 35 U.S.C. 103(a) rejections, the Examiner states that "Cox is relied upon for the teachings as discussed above relative to Claims 1-4, 10-17, 21-27, 30 and 34-36 as found herein." However, a claim 1 rejection is not mentioned until paragraph 19 of the office action, wherein the Examiner states, "Newly amended Claims 1 and 27 are further rejected under 35 U.S.C. 103(a) as obvious over Cox ('533) alone and in view of Daly ('896)." The Examiner is respectfully requested to provide clarification regarding claim 1.

Claim 1 recites in part:

“..establishing a set of attributes of a service provision; selecting from said set of attributes for defining a Service Level Agreement (SLA) with the service provider; and provisioning at least one client computer of the customer in accordance with constraints imposed by the SLA.” (emphasis added)

As previously discussed, Cox et al. is primarily concerned with providing a Service Delivery Infrastructure (SDI) to support and manage service delivery in a telecommunication environment, rather than with the service creation process itself. Accordingly Cox et al. states:

“There is an obvious need for infrastructure to support and manage service delivery, which can allow the service provider or user to take advantage of the flexibility of the developing service creation capabilities without also creating insurmountable difficulties in service management or access.” (column 3, lines 46-51)

Cox et al. further defines a virtual network as:

“... a term used to describe a network effectively dedicated to use of a single customer, such as an international corporate entity, which appears to the user much as a private network would have appeared in the past, defined in dedicated hardware, but which is defined from a greater transmission capability usually simply by software. That is, the virtual network is only limited, for instance in geographical layout and in capacity, by a software specification, in accordance with the requirements of the customer, which specification allocates resources from a transmission network.” (column 6, lines 54-65)

As previously noted, within the Cox et al. Service Delivery Infrastructure environment,

“A service is considered to be a unique entity which only has meaning within the context of a particular virtual network 800. Therefore a virtual network 800 must exist before a service can be deployed within the SDI 200. (column 20, lines 60-63)

An SDI service is an executable application that can process calls. (column 21, lines 1-2)

This is clearly distinguishable from claim 1 of the present invention at least because Cox et al. do not disclose or suggest “defining a Service Level Agreement (SLA) with the service provider; and provisioning at least one client computer of the customer,” as recited in claim 1. As previously noted Cox et al. are primarily concerned with providing a Service Delivery Infrastructure over virtual networks and not with the service creation process itself. It is further submitted that it would not have been obvious to one skilled in the art at the time of the invention to use the virtual network Service Delivery Infrastructure of Cox et al. to provision at least one client computer of a customer of a service provider, as the Cox et al. SDI service is an executable application that can process calls. (see column 21, lines 1-2) It is not seen where one would be motivated to extend the virtual network SDI call processing requirement of Cox et al. to at least one client computer of a customer of a service provider. For at least this reason, claim 1 is not obvious over Cox et al. and should be allowed.

In that claim 1 is allowable over Cox et al., then claims 2-24 should be allowed as well. However, and as was noted above, the Examiner has now rejected claim 1 as unpatentable over Cox et al. in view of Daly as discussed below.

Turning now to claim 25, and as was argued above in the discussion related to the rejection of claim 25 under 35 U.S.C. 102(b), claim 25 recites in part:

“..provisioning the customer, within the constraints imposed by the SLA, by allocating at least some required data processing resources to at least one data processing site that offers data processing capacity for use; and transparently re-provisioning the customer, within the constraints imposed by the SLA, by re-allocating at least some required data processing resources from the at least one data processing site that offers data processing capacity for use to one of the customer, the service provider, or another service provider.” (emphasis added)

The Examiner’s argument that “a communications network, such as the one disclosed in Cox is not limited in its use of data processing resources, which in this case Examiner believes to include those resources deemed necessary to facilitate network activity, which is inclusive but not limited to customer data processing tasks,” is not supported by a reading of Cox et al. Cox et al state that:

“A virtual network has people that use it--users. They use some form of station on the network, e.g. a phone, a terminal etc. The stations are connected to a node, e.g. a private PBX, a termination point in the public telephony network, a channel in the cellular network etc. Nodes are located at sites. The virtual network in this context and in the context of embodiments of the present invention is the interconnection between these nodes. A virtual network 800 is configured to have services. A service is a particular communications capability, e.g. Plain Old Telephony Service (POTS), Voice Mail, etc.” (column 15, lines 33-43)

Cox et al. are concerned with providing delivery of telecommunication services and not “allocating at least some required data processing resources to at least one data processing site that offers data processing capacity for use” or “re-allocating at least some required data processing resources from the at least one data processing site that offers data processing capacity for use to one of the customer, the service provider, or another service provider,” as recited in claim 25. At least because Cox et al. do not disclose or suggest all features of claim 25, claim 25

is clearly not obvious in view of Cox et al. and should be allowed.

Similarly, claim 26 recites in part:

“..provisioning the customer, within the constraints imposed by the SLA, by allocating at least some required data processing resources to at least one other service provider that offers data processing capacity for use; and transparently re-provisioning the customer, within the constraints imposed by the SLA, by re-allocating at least some required data processing resources from the at least other service provider that offers data processing capacity for use to one of the customer, the service provider, or a data processing site that offers data processing capacity for use.”

As previously discussed, Cox et al. do not teach or suggest at least “allocating at least some required data processing resources to at least one other service provider that offers data processing capacity for use”, or “re-allocating at least some required data processing resources from the at least other service provider that offers data processing capacity for use to one of the customer, the service provider, or a data processing site that offers data processing capacity for use.” as recited in claim 26. As noted previously, Cox et al. are primarily concerned with providing a virtual network SDI infrastructure for processing calls, and not with “allocating at least some required data processing resources to at least one other service provider that offers data processing capacity for use...” At least because Cox et al. do not disclose or suggest all features of claim 26, claim 26 is not obvious in view of Cox et al. and should be allowed.

These same arguments also apply to claim 35, which recites in part:

“..third executable code for provisioning the customer, within the constraints imposed by the SLA, by allocating at least some required data processing resources to at least one of the service provider, the customer, to another service



provider, or to a data processing site that offers data processing capacity for use;  
and fourth executable code for transparently re-provisioning the customer, within  
the constraints imposed by the SLA, by re-allocating at least some required data  
processing resources between at least one of the service provider, the customer,  
the another service provider, or the data processing site that offers data processing  
capacity for use.” (emphasis added)

As previously discussed, Cox et al. do not teach or suggest at least “allocating at least some required data processing resources to at least one of the service provider, the customer, to another service provider, or to a data processing site that offers data processing capacity for use” or “re-allocating at least some required data processing resources between at least one of the service provider, the customer, the another service provider, or the data processing site that offers data processing capacity for use” as in claim 35. At least because Cox et al. do not disclose or suggest all features of claim 35, claim 35 is not obvious in view of Cox et al. and should be allowed.

Similarly, claim 36 recites in part:

“..a plurality of data processing sites coupled to a communication network,  
individual ones of said sites comprising program code for registering available  
data processing capability using said communication network; and a virtual  
service provider coupled to the customer through the communication network,  
said virtual service provider comprising a system management server for  
establishing a set of attributes of a customer service provision, and for allocating  
data processing capability for provisioning the customer from the data processing  
capability registered by said plurality of data processing sites.” (emphasis added)

As previously discussed, Cox et al. do not teach or suggest at least “a plurality of data processing sites coupled to a communication network... for registering available data processing capability using said communication network”, or “a virtual service provider coupled to the customer

through.... a system management server... for allocating data processing capability for provisioning the customer from the data processing capability registered by said plurality of data processing sites” as in claim 36. At least because Cox et al. do not disclose or suggest all features of claim 36, claim 36 is not obvious in view of Cox et al. and should be allowed.

At least because independent claims 1, 25, 26, 35 and 36 are not rendered unpatentable by Cox et al., dependent claims 2-24 which depend from independent claim 1, and dependent claims 37-40 which depend from independent claim 36, are also clearly not rendered unpatentable by Cox et al. and should be allowed.

For example, claim 5 recites:

“A method as in claim 1, wherein the step of provisioning the customer includes a step of allocating service provider data processing resources to a data processing task of the customer.”

As previously discussed, Cox et al. is primarily concerned with providing services for telecommunication calls, and is not seen to teach or suggest the situation where services are made available to at least one client computer of a customer by “allocating service provider data processing resources to a data processing task of the customer.” Thus Cox et al. do not provide a solution to the problems that the present invention seeks to overcome and therefore, claim 5, which is dependent on claim 1, is not rendered obvious in view of Cox et al.

Additionally, claim 28 recites in part:

“...said system management server is responsive to at least one of a customer service-related criterion, a service provider criterion, or a change in a data processing environment, for re-provisioning the customer, within constraints imposed by said SLA, by allocating service provider data processing resources to

a data processing task of the customer, or by allocating customer data processing resources to a data processing task of the customer, or by allocating data processing resources of another service provider to a data processing task of the customer, or by allocating all required data processing resources from at least one other service provider to a data processing task of the customer, or by allocating data processing resources from a remote data processing site to a data processing task of the customer.” (emphasis added)

The services in Cox et al. are concerned with services provided by virtual networks, as opposed to the present invention which is concerned with “..allocating service provider data processing resources to a data processing task of the customer, or by allocating customer data processing resources to a data processing task of the customer, or by allocating data processing resources of another service provider to a data processing task of the customer...” Cox et al. does not teach or suggest of a choice of whether a service should be provided locally on a client device, or locally from a server, or remotely from a server. Cox et al. are primarily concerned with service provision in the virtual network itself.

Thus, it would not have been obvious to one skilled in the art to include additional data processing resource allocation beyond the SDI of Cox et al.

Claim 27 recites in part:

“a customer interface for selecting from said set of attributes for defining a Service Level Agreement (SLA) with the service provider, said system management server being responsive to said SLA for provisioning at least one client computer of the customer in accordance with constraints imposed by the SLA.” (emphasis added)

As previously discussed, Cox et al. is not seen to teach or suggest a “system management server

being responsive to said SLA for provisioning at least one client computer of the customer..."  
For at least this reason, claim 27 is not obvious in view of Cox et al.

Further Daly applies to a client/server computer network whereas Cox et al. applies to a telephone communication network. For at least this reason, it would not have been obvious to one skilled in the art to combine the teachings of Daly and Cox et al. in an attempt to arrive at the present invention. Therefore, claim 27 is not rendered unpatentable by Cox et al. in view of Daly and should be allowed.

Claim 36 recites in part:

"..a plurality of data processing sites coupled to a communication network, individual ones of said sites comprising program code for registering available data processing capability using said communication network; and a virtual service provider coupled to the customer through the communication network, said virtual service provider comprising a system management server for establishing a set of attributes of a customer service provision, and for allocating data processing capability for provisioning the customer from the data processing capability registered by said plurality of data processing sites."

Cox et al. does not disclose a virtual service provider as in claim 36. Cox et al. does disclose a virtual network:

"It might be useful to note in the following description that "virtual network" is a term used to describe a network effectively dedicated to use of a single customer..." (see column 6, lines 54-56)

However, it is not admitted that this disclosure of a "virtual network" implies a "virtual service provider." As is stated in the instant specification at page 8, lines 7-11, a virtual service provider provides "data processing resources offered by data processing sites, wherein the virtual service

provider need not own or control the data processing resources used to provision its customers.” This is clearly distinguishable from the “virtual network” of Cox et al. For at least this reason, claim 36 is not rendered obvious by the proposed combination of Cox et al. and Daly and should be allowed.

Claim 1 recites in part:

“..establishing a set of attributes of a service provision; selecting from said set of attributes for defining a Service Level Agreement (SLA) with the service provider; and provisioning at least one client computer of the customer in accordance with constraints imposed by the SLA.” (emphasis added)

As was previously discussed, Cox et al. do not teach or suggest at least the use of Service Level Agreements (SLAs) where services are made available to at least one client computer of a customer of a service provider. Cox et al. is primarily concerned with providing a telecommunication Service Delivery Infrastructure over virtual networks and not with the service creation process itself. It is thus submitted that it would not have been obvious to one skilled in the art at the time of the invention to use the virtual network Service Delivery Infrastructure of Cox et al. to provision at least one client computer of a customer of a service provider, as the Cox et al. SDI service is an executable application that can process calls (see column 21, lines 1-2). One of ordinary skill in the art would not be motivated to extend the virtual network SDI call processing requirement of Cox et al. to at least one client computer of a customer of a service provider. For at least this reason, there is no suggestion or motivation to combine Cox et al. and Daly as the Examiner has attempted to do.

At least because independent claims 1, 27 and 36 are not rendered unpatentable by the proposed combination of Cox et al. and Daly, dependent claims 2-24, 28-34 and 37-40 are also clearly not rendered unpatentable by the proposed combination of Cox et al. and Daly and should be allowed.

Turning now to the Examiner's Response to Arguments, the non-substantive amendments made to Claims 25, 26, and 35 as noted in paragraph 22, were made in order to correct typographical errors.

Regarding Examiner argument in paragraph 24, the resource allocator in Cox et al. "deduces which physical resources are available to allocate perform operations for active calls." (column 32, lines 8-9, emphasis added) However, it is pointed out that the resource allocator of Cox et al. is not disclosed to allocate nor re-allocate "some required data processing resources to at least one data processing site that offers data processing capacity for use" as in claim 25, or to a data processing task of a customer as in claim 5 or to at least one other service provider that offers data processing capacity for use, as in claim 26.

Additionally, at column 15, lines 33-43, Cox et al. states:

"A virtual network has people that use it--users. They use some form of station on the network, e.g. a phone, a terminal etc. The stations are connected to a node, e.g. a private PBX, a termination point in the public telephony network, a channel in the cellular network etc. Nodes are located at sites. The virtual network in this context and in the context of embodiments of the present invention is the interconnection between these nodes. A virtual network 800 is configured to have services. A service is a particular communications capability, e.g. Plain Old Telephony Service (POTS), Voice Mail, etc."

The services in Cox et al. thus clearly are for telecommunications equipment, and not for data processing tasks.

While Cox et al. does disclose a virtual network at column 6, lines 54-56, wherein Cox et al. states: "It might be useful to note in the following description that "virtual network" is a term

used to describe a network effectively dedicated to use of a single customer...”, it is not admitted that this disclosure of a “virtual network” implies a “virtual service provider” as the Examiner asserts in paragraph 25. A virtual service provider is defined as a third-party entity that provides “data processing resources offered by data processing sites, wherein the virtual service provider need not own or control the data processing resources used to provision its customers” (referring to page 8, lines 7-11 of the present invention), whereas a virtual network is defined as a network that provides virtual circuits and that is established by using the facilities of a real network. A virtual network does not inherently imply the use of a virtual service provider as the Examiner asserts. The two are distinct. At least for this reason, claim 36 is patentable and should be allowed.

The use of a value added service provider is not suggested within Cox et al. as the Examiner suggests in paragraph 28, referring to column 1, lines 24-27. As is stated in the instant specification at page 31, lines 7-23, a value added service provider, also referred to as a value added services reseller (VASR),

“integrates services provided by one or more of these SPs [service providers] with services provided, optionally, by the VASR itself, and possibly also with services provided by the IT department of the customer 3. The VASR model provides value to the customer 3, and realizes revenue as a consequence of that value, through the increased convenience and productivity that results from the integration of these services. Although this business model might be practiced without the teachings of this invention, the VASR model is enhanced by these teachings, in that the SIT [service instantiation transparency] aspect of the teachings of this invention enables a flexible choice of service provisionings and of service providers. For example, the use of the VASR model may provide an evolutionary path to outsource all of the requirements of the customer 3, without discontinuities appearing to the end users (customers 3). The VASR is similarly free to provision or outsource services to others.”

Cox et al. is primarily concerned with providing a Service Delivery Infrastructure (SDI) for telecommunications services, and not with offering a choice of service providers. For at least this reason, claim 33 is not unpatentable over Cox et al. and should be allowed.

For at least the foregoing arguments, it should be clear that none of the prior art cited and relied on by the Examiner, either singularly or in combination, either anticipates or renders obvious the claimed subject matter. Claims 1-40 are thus clearly allowable over the prior art cited by the Examiner, and the Examiner is respectfully requested to reconsider and remove the rejections.